

IN THE UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

EASTMAN CHEMICAL COMPANY,
Plaintiff,

v.

PLASTIPURE, INC. and
CERTICHEM, INC.,
Defendants.

§
§
§
§
§
§
§
§

CIVIL ACTION NO. 1:12-CV-57

PLAINTIFF'S ORIGINAL COMPLAINT

Plaintiff Eastman Chemical Company complains of PlastiPure, Inc. and CertiChem, Inc.
and for cause would respectfully show the Court as follows:

I. PARTIES

1. Plaintiff Eastman Chemical Company ("Eastman") is a Tennessee corporation whose principal place of business is Kingsport, Tennessee.

2. PlastiPure, Inc. ("PlastiPure") is a Texas corporation whose principal place of business is Austin, Texas. PlastiPure may be served with process upon its registered agent for process in the State of Texas, Mark Cohen, at 805 W. 10th St., #100, Austin, Texas 78701.

3. CertiChem, Inc. ("CertiChem") is a Texas corporation whose principal place of business is Austin, Texas. CertiChem may be served with process upon its registered agent for process in the State of Texas, Mark Cohen, at 805 W. 10th St., #100, Austin, Texas 78701.

II. JURISDICTION AND VENUE

4. Jurisdiction of this Court over these claims and parties is proper pursuant to 28 U.S.C. §1331, as this civil action arises under the federal laws of the United States.

5. Jurisdiction of this Court over these claims and parties is also proper pursuant to 28 U.S.C. §1338, as this civil action asserts claims of unfair competition and arises under Acts of Congress relating to trademarks.

6. Jurisdiction of this Court over these claims and parties is also proper pursuant to 28 U.S.C. §1332, as this civil action is between citizens of different States and the matter in controversy exceeds the sum or value of \$75,000, exclusive of interest and costs.

7. Jurisdiction of this Court over these parties with respect to the claims arising under the laws of the State of Texas is proper pursuant to 28 U.S.C. §1367 because the state claims are so related to the claims over which this Court has jurisdiction pursuant to 28 U.S.C. §§1332 and 1338 that they form part of the same case or controversy under Article III of the United States Constitution.

8. Venue of this civil action is proper in this Court pursuant to 28 U.S.C. §1391 because both PlastiPure and CertiChem reside in this judicial district.

III. FACTUAL BACKGROUND

A. EASTMAN CHEMICAL COMPANY'S DEVELOPMENT OF TRITAN.

9. Eastman is the manufacturer of TritanTM, a copolyester resin designed for use in rigid plastic applications. Tritan's durability, rigidity, aesthetics, heat resistance, chemical resistance, and ease of use in manufacturing make it a viable alternative to polycarbonate, a widely used plastic. Eastman began developing Tritan in 2005, and pellets of Tritan resin have been commercially available to customers since 2007.

10. Shortly after Eastman began selling Tritan concerns about the safety of bisphenol-A ("BPA") leaching from polycarbonate began to be debated. These concerns were premised on scientific studies alleging that BPA could activate estrogen receptors in the human body.

Chemicals that mimic naturally occurring hormones in the body, like estrogen, and cause adverse health effects are referred to as endocrine-disrupting chemicals (“EDCs”). Chemicals that specifically mimic estrogen, as BPA is alleged to do, are said to possess estrogenic activity (“EA”). The activation of estrogen receptors by EDCs may trigger hormone-dependent cancers, reproductive abnormalities, or other negative health effects.

11. Tritan’s polymer is composed of three monomers, none of which is BPA. Because of the rise in consumer consciousness about the alleged negative health effects of BPA, some manufacturers began replacing the polycarbonate in their products with other BPA-free products, such as Tritan. As a BPA-free plastic, Tritan was available to manufacturers and consumers as an alternative to plastics made from BPA. Tritan was therefore coincidentally well-situated to fill almost immediately a substantial portion of the market vacuum created by anti-BPA consumer sentiment.

B. PLASTIPURE AND CERTICHEM’S MCF-7 CELL PROLIFERATION ASSAY.

12. Upon information and belief, PlastiPure is a company started by Dr. George Bittner that offers consulting, licensing, manufacturing, and/or certification services to manufacturers or brand-owners of plastic products. PlastiPure purports to possess unique knowledge regarding how to ensure the absence of EA in plastic products.

13. PlastiPure’s sister company, CertiChem, offers EA testing services. Upon information and belief, CertiChem’s primary test is the MCF-7 cell proliferation assay. MCF-7 is a line of human breast cancer cells having estrogen receptors.

14. PlastiPure and CertiChem are closely related companies. They share common ownership, management and employees. They are located in the same offices. They cross-promote one another through their advertising and marketing, including on their websites. In

light of their overlapping interests, CertiChem presumably has strong financial interests in promoting the MCF-7 cell proliferation test despite its shortcomings as a definitive test for EA (described below).

15. As stated, the MCF-7 cell proliferation assay is not a definitive, final test for EA, is well known to just be a screening test and furthermore has a propensity to respond to non estrogen receptor mediated factors and can therefore exhibit false positives. PlastiPure and CertiChem have both confirmed the limitations of the MCF-7 cell proliferation assay. For example, in CertiChem's Test Method Nomination of the MCF-7 cell proliferation assay, which it presented to the EPA, CertiChem made the following statement in the section entitled "Weaknesses:"

A general weakness is that this robotic MCF-7 *in vitro* assay for EA is intended as a Tier 1 screen for EA, ***not a definitive final test for EA***. That is, the EDSTAC [Endocrine Disruptors Screening and Testing Advisory Committee] recommended a system consisting of two 'Tiers' of ED testing. Tier 1 *in vitro* and *in vivo* tests are designed to identify substances that have the ***potential*** to interact with the endocrine system.

(Emphasis and parenthetical added). With respect to which protocols are definitive tests for EA, CertiChem's website contains the following statement:

The uterotrophic response assay (using prepubertal or adult ovariectomized animals) has been considered the most reliable indicator of *in vivo* estrogenic activity.

C. PLASTIPURE AND CERTICHEM'S FALSE ADVERTISING CAMPAIGN.

16. Upon information and belief, PlastiPure's strategy for capitalizing on the anti-BPA sentiment has involved attempting to draw a distinction between EA-free and merely BPA-free materials. Upon information and belief, CertiChem offers its customers assistance in identifying possible EDCs through its MCF-7 cell proliferation assay, and PlastiPure

offers its services in eliminating EDCs from the manufacturing process. PlastiPure's advertising campaign and business strategy depend on convincing potential customers and consumers that the fact that a plastic does not contain BPA is no assurance that it is free from harmful EDCs.

17. While substances other than BPA can exhibit EA, PlastiPure's and CertiChem's media campaign exaggerates the extent to which EA is present in plastic products – particularly those made with Tritan. For example, the following is an excerpt from an *Austin-American Statesman* article dated May 2, 2008, called “UT Prof's Firm Says It's Built a Better Bottle:”

Although a number of big players, including Eastman Chemical, have begun making plastic without BPA, Plasti-Pure said its patented resins are unique because they are free of all estrogenic activity, not just BPA.

18. Upon information and belief, PlastiPure also prepared a white paper called “EA-Free Plastics: The Only Alternative for Safe Plastics.” In this May 28, 2008 paper, PlastiPure stated:

PlastiPure has not yet identified any other commercially available plastic product which can be classified as EA-free [having no detectable EA according to the most sensitive available assays]. In addition, no other firm is currently advertising EA-free plastics, although there are some firms which are marketing “Bisphenol-A-free” or “phthalate-free” products (USA Today, 2007). **However, although they may not contain BPA or phthalates, PlastiPure's and CertiChem's data show that in normal use these products do release other additives (or monomers) that exhibit EA.** In fact, these data show that products advertised as BPA-free or phthalate-free plastics often release chemicals that have *more* total EA than the total EA released by products containing BPA or phthalates.

(Emphasis and parentheticals in the original).

19. Similarly, PlastiPure's website contains the following false or misleading statements:

- "PlastiPure is the first and only company developing plastic materials, processes, and products that are safer both for humans and the environment;"
- "PlastiPure uses the most sensitive available EA assay tests to ensure that its products are the safest. It's why we can say with certainty 'You won't find a safer plastic;"
- "Plastics produced with chemicals that have EA are commonly used in water bottles, baby bottles, food containers, bags, linings for metal food cans, linings for wine/beer fermentation vats, toys, medical devices, dental materials, and many, many other plastic products."
- "Almost all existing plastics – as well as silicones, rubbers, and papers – release chemicals with estrogenic activity (EA);" and
- "Bittner and his team of experts – scientists from cellular and molecular biology, endocrine physiology, polymer chemistry, and polymer engineering – have invested millions of dollars over the last decade to develop the technology, intellectual property and exclusive patents to produce EA-Free plastics."

20. Additionally, Eastman began hearing from its customers that PlastiPure had informed them that Tritan exhibits EA and that Tritan had failed testing for EA. Eastman knew these statements to be false or misleading because of the results of its own tests, discussed more fully in Section III.D below.

21. Nonetheless, PlastiPure's and CertiChem's statements about Tritan required Eastman to dispatch its scientists and other knowledgeable representatives to confer with customers and potential customers who had heard or read these false or misleading statements, present the results of its EA tests, and assure them that Tritan is, in fact, EA-free.

D. EASTMAN'S RELIABLE TESTING OF TRITAN FOR ESTROGENIC ACTIVITY.

22. Contrary to Defendants' false and misleading statements, Eastman has subjected Tritan to extensive testing to confirm that the monomers that comprise the Tritan polymer, as well as plastic articles molded from Tritan, do not exhibit EA. These tests were conducted by respectable, independent third-party laboratories using well recognized methodologies. Those tests include the following protocols:

- **Quantitative structure activity relationships (QSAR).** Computer modeling of monomers to assess each substance's molecular structure and its ability to bind to human estrogen and androgen (testosterone) receptors in a manner that leads to biological activity.
- **Receptor transactivation assays.** The estrogenic and androgenic activity of both the monomers and concentrated extracts of Tritan were also evaluated *in vitro* using both yeast and mammalian cell assays performed by two separate labs. These tests evaluate a substance's ability to bind to a hormone receptor and, if bound, cause gene expression.
- **Competitive binding assays.** Despite the fact that neither the QSAR nor transactivation studies showed any evidence of binding or gene expression by estrogenic or androgenic pathways, a second tier of tests based on competitive binding assays was conducted. These tests can confirm a substance's ability to specifically bind to a hormone receptor and can be used to calculate the Relative Binding Affinity (RBA).
- **Uterotrophic assay/Hershberger assay.** These are considered the definitive tests for assessing a chemical's potential to elicit estrogenic or androgenic responses in living biological systems. These *in vivo* tests are part of the Tier I Endocrine Disruption Screening Program of the U.S. Environmental Protection Agency (EPA).

Each of the foregoing tests resulted in an unambiguous determination that neither Tritan nor its monomers exhibited EA. These tests represent a comprehensive set of testing assays, including the "gold standard" of EA testing comprised of the uterotrophic and Hershberger assays. Nonetheless, PlastiPure and CertiChem did not retreat from any of their statements that virtually all plastics other than their own exhibit EA.

E. PLASTIPURE AND CERTICHEM'S FALSE AND MISLEADING COMPARATIVE BROCHURE.

23. In the fall of 2010, at the ABC Kids Expo (a large infant care trade show held in Las Vegas, Nevada), PlastiPure distributed a brochure called "EA-Free Plastic Products: Beyond BPA Free" ("the Brochure") (**Exhibit A**) As of the date of the filing of this Complaint, the Brochure is publicly available on the home page of PlastiPure's website. In the lower right-hand corner of the Brochure is a graph that purports to show relative EA levels of three polycarbonate samples (in light gray), five products made with Tritan (in red), and six products identified as "PlastiPure-Safe" (in green). Next to the graph is the following statement:

Examples of test results of products claiming to be EA-free or made from materials claiming to be EA-free are given in the figure to the right. *Most examples are made from Eastman's Tritan resin.* (Emphasis added).

24. The graph, together with the explanatory language accompanying it, makes the false factual claims that Tritan exhibits EA and that those levels of EA are comparable to polycarbonate and greater than those exhibited by pure estrogen. This chart stands out from the brochure as the largest graphic on the page. Furthermore, the red bars representing Tritan products' alleged EA levels stand out strongly against the small type and light blue PlastiPure graphics in the rest of the Brochure. Beneath the red bars appears "Eastman's Tritan," clearly placed there to leave the impression that Eastman Tritan exhibits high levels of EA.

25. The overall message of the Brochure is that Tritan is harmful to consumers' health because Tritan exhibits high levels of EA – in some cases, higher than polycarbonates and even higher than natural 17 β -estradiol.

Upon information and belief, PlastiPure also distributed the Brochure at the 2010 K-Show, an international trade show in Dusseldorf, Germany. This Brochure is also available to the public on PlastiPure's website. Eastman has expended substantial cost and expense to alleviate concerns about Eastman's Tritan created by the material misstatements in the Brochure.

F. PLASTIPURE'S FURTHER ATTEMPTS TO CREATE CONFUSION AMONG CONSUMERS.

26. Although PlastiPure's marketing was originally targeted at plastic manufacturers generally, PlastiPure then began attempting to create consumer demand for its products and services. On or about March 2, 2011, PlastiPure published a white paper in *Environmental Health Perspectives*, a peer-reviewed journal, claiming that the majority of commercially available plastics readily leach chemicals having EA. Notably, the white paper acknowledged and disclosed the potential for conflicts of interest as between PlastiPure and CertiChem in relation to their testing and marketing. This publication coincided with a story about PlastiPure on the March 2, 2011 news program *All Things Considered* on *National Public Radio*, as well as a similar story on the March 4, 2011 NPR program *Morning Edition*. Although none of the media pieces mentioned Tritan by name, the NPR website featured articles based on information from these news programs, along with photographs of plastic products manufactured with Tritan. Through this media coverage, PlastiPure continued its pattern of attempting to create consumer fear of plastics so that PlastiPure and CertiChem presumably could capitalize on the market opportunity.

G. PLASTIPURE DIRECTLY CONTACTS EASTMAN'S CUSTOMERS.

27. PlastiPure's next strategy for generating business involved specifically targeting Eastman's customers and providing false, misleading, or disparaging information about Tritan, apparently to scare Eastman's customers into partnering with PlastiPure or replacing

Tritan with another polymer. In October 2011, Eastman learned from a major Korean plastics manufacturer and Eastman customer (“the Eastman customer”) that PlastiPure had made false and disparaging comments about Tritan directly to the Eastman customer. Upon information and belief, the Eastman customer contacted PlastiPure after a competitor of the Eastman customer (the “Competitor”) appeared on a Korean television station and, apparently with PlastiPure’s assistance, disparaged the Eastman customer’s products, particularly those manufactured with Tritan. PlastiPure then offered its services to the Eastman customer, claiming it could help the Eastman customer make EA-free products. In doing so, PlastiPure specifically suggested that the Eastman customer stop using Tritan and repeated its false claim that Tritan exhibited EA, stating in writing, “Where a customer is working with *a material, such as Tritan, that our tests show has high levels of EA*, PlastiPure has to be more creative in its solutions. An example of addressing this issue would be to change material type . . .” (Emphasis added.)

28. Unlike PlastiPure’s previous attempts to create a market for its goods and services through false and misleading information, these contacts with Eastman’s customers and other plastics manufacturers and competitors have caused substantial confusion that Eastman has not yet been able to correct.

IV. CLAIMS

COUNT 1: VIOLATING THE FEDERAL LANHAM ACT

29. PlastiPure’s advertising materials and communications to customers and potential customers draw a direct comparison between PlastiPure’s products and Eastman’s Tritan. PlastiPure’s Brochure and its statements to customers and consumers that Tritan has high levels of EA falsely represent the nature, characteristics, and qualities of Eastman’s Tritan.

Statements regarding the harmful effects of EDCs are material to consumers' purchasing decisions. PlastiPure is making these statements in its commercial advertising and promotion, and Tritan is used and sold in interstate commerce.

30. Additionally, PlastiPure's misleading comparison between its products and Eastman's Tritan is necessarily diminishing Tritan's value. As such, Eastman has already suffered injury and irreparable damage, and Eastman will continue to suffer such injury and damages, as a result of PlastiPure's false advertisements.

31. PlastiPure's false or misleading statements were made knowingly and maliciously. PlastiPure knowingly used a screening test to justify conclusory and definite statements without performing the follow-up, definitive tests that PlastiPure itself admits are the most reliable indicators of EA. Furthermore, PlastiPure engaged in this false advertising campaign with the deliberate intent of confusing and deceiving the public.

32. Furthermore, by testing products manufactured with Tritan to enable PlastiPure to make these misleading statements, CertiChem undertook a misleading comparative study and thereby knowingly caused these false representations to be used in connection with goods and services in interstate commerce.

33. As such, PlastiPure and CertiChem have both violated the federal Lanham Act, 15 U.S.C. §1114.

COUNT 2: BUSINESS DISPARAGEMENT

34. PlastiPure has published disparaging words about Eastman's economic interests — namely, that Tritan exhibits high levels of EA. These statements are false, and PlastiPure knew these statements to be false and unfounded, but PlastiPure nevertheless published these statements maliciously and with the intent to interfere with Eastman's economic interests.

PlastiPure had no privilege to publish these words. As a result of PlastiPure's disparagement of Eastman's business, Eastman has suffered special damages.

COUNT 3: TORTIOUS INTERFERENCE WITH EXISTING AND PROSPECTIVE CONTRACTUAL RELATIONS

35. Eastman has valid contracts with several of its customers, and prospective contracts with others, including the Korean customer. By circulating false advertising materials targeting Tritan and by falsely and misleadingly telling these customers that Tritan exhibited high levels of EA, PlastiPure willfully and intentionally interfered with those contracts and prospective contracts. This interference proximately caused Eastman injury, and Eastman suffered actual damages as a result.

COUNT 4: UNFAIR COMPETITION

36. PlastiPure's conduct is contrary to honest practice in industrial and commercial matters. PlastiPure and Certichem engaged in false comparative advertising, including making conclusory statements unsupported by reliable tests in violation of proper testing and evaluation protocols. As such, PlastiPure and CertiChem's conduct in violation of the Lanham Act also constitutes a violation of Texas common law.

COUNT 5: CIVIL CONSPIRACY AND PARTICIPATORY LIABILITY (AIDING AND ABETTING)

37. Upon information and belief, PlastiPure and CertiChem are closely related companies that share advertising materials, ownership, and board members. These two companies are members in a combination of two or more members, and this combination had the object of accomplishing the unlawful purpose of violating the Lanham Act, disparaging Eastman's economic interests, tortiously interfering in Eastman's contracts, and engaging in unfair competition in violation of the Texas common law. They had a meeting of the minds

on this object or course of action, and either or both of them committed an unlawful, overt act to further the object or course of action. Eastman suffered injury as a proximate result of this combination of members. As such, PlastiPure and CertiChem are each liable for the wrongful conduct of the other as members of the unlawful civil conspiracy.

38. Furthermore, upon information and belief, CertiChem aided and abetted PlastiPure's wrongful conduct, including business disparagement and tortious interference with existing contracts, by providing testing results to PlastiPure. CertiChem intended to assist PlastiPure in engaging in its wrongful conduct and therefore gave PlastiPure assistance and/or encouragement. This assistance and/or encouragement constituted a substantial factor in causing PlastiPure's tortious conduct. Because CertiChem aided and abetted PlastiPure's unlawful conduct, CertiChem is liable for that unlawful conduct.

COUNT 5: INJUNCTIVE RELIEF

39. For the foregoing reasons, pursuant to 15 U.S.C. §1116, Eastman requests this Court to issue the following permanent injunctive relief. Specifically, Eastman requests that this Court enjoin Defendants, their agents, and any one acting in concert with them, from engaging in the following activities:

- Representing, expressly or by implication, in any advertising, promotion, offering for sale, or sale of goods and services or in any other commercial manner that TritanTM exhibits any measurable level of EA, that PlastiPure or CertiChem has tested TritanTM and shown it to be positive for EA, or that TritanTM is somehow dangerous to human health or safety or the environment;
- Representing, expressly or by implication, in any advertising, promotion, offering for sale, or sale of goods and services or in any other commercial manner that:
 - PlastiPure is the first and only company developing plastic materials, processes, and products that are safer for human

- The MCF-7 cell proliferation assay is sufficient, standing alone, to establish that any tested chemical or substance exhibits EA, or that PlastiPure's or CertiChem's testing is more reliable than Eastman's testing;
- Distributing, copying, displaying, sending, mailing, printing, giving, disseminating, advertising, or otherwise making available the brochure entitled "EA-Free Plastic Products: Beyond BPA Free" or any substantially similar marketing or advertising materials;
- Performing any actions, including, without limitation, using the Eastman Tritan trademark ("the Mark"), which actions are likely to cause confusion, to cause mistake or deceive, or to otherwise mislead the trade or public about the nature, quality, or characteristics of Tritan or any other product bearing the Mark;
- Using the Mark in such a manner to create a likelihood of confusion as to the business reputation of Eastman or a likelihood of dilution to the Mark and the goodwill associated therewith; or
- Selling, distributing, advertising, referencing, or allowing any other person, entity, or business affiliated with Defendants or subject to their control to engage in any of the activities set forth above, or aiding, abetting, or assisting any other person or business entity in engaging in or performing any of the activities set forth above.

V. CONDITIONS PRECEDENT

40. All conditions precedent have occurred or have been performed.

VI. JURY DEMAND

41. Eastman hereby requests a trial by jury.

VII. REQUEST FOR RELIEF

After trial on the foregoing counts, Plaintiff Eastman Chemical Company respectfully requests that this Court award Eastman the following relief:

1. Economic damages in an amount to be determined at trial but beyond the jurisdictional limits of this Court;
2. Permanent injunctive relief as requested above;

3. Exemplary damages;
4. Special damages;
5. Costs of court;
6. Attorney's fees;
7. Prejudgment and post-judgment interest; and
8. Any such other and further relief, in law or in equity, to which Eastman may have shown itself to be justly entitled.

Respectfully submitted,

FRITZ, BYRNE, HEAD & HARRISON, PLLC
98 San Jacinto Blvd., Suite 2000
Austin, Texas 78701
Telephone: (512) 476-2020
Telecopy: (512) 477-5267

By:


Rick Harrison
Texas State Bar No. 09120000
Kevin W. Brown
Texas State Bar No. 24045222
Eleanor Ruffner
Texas State Bar No. 24047034

**ATTORNEYS FOR PLAINTIFF EASTMAN CHEMICAL
COMPANY**



EA-Free Plastic Products:
Beyond BPA-Free



The New Safety Standard in Plastics: PlastiPure-Safe™ EA-Free

Consumers have begun to learn about the potential health and environmental hazards associated with synthetic chemicals having Estrogenic Activity (EA) used in many plastic products. Many well-publicized reports have shown that BPA, phthalates, and parabens have easily detectable levels of EA.

But few consumers understand yet that these widely publicized chemicals are only a few of the thousands of chemicals suspected of having EA. At least several hundred of these chemicals are used in various combinations in manufacturing plastics. Many more chemicals having EA are commonly used in materials and compounds such as silicones, latex, elastomers, colorants, inks, additives, and processing aids. When products are made from or processed using these materials, they frequently leach chemicals having EA into foodstuffs, beverages, lotions, cosmetics, and other consumables, and so are continuously ingested by humans. When these products are thrown away, they leach these same chemicals into our water supplies and soil, impacting wildlife and our environment.

The current publicity-driven approach to removing chemicals with EA one at a time, as with BPA, has produced a false sense of security for consumers and retailers. Purchasing plastics with certain recycling numbers or plastics advertised as BPA-free does not address the underlying health issues. Most "BPA-free" products on the market leach other chemicals having EA. Leaching can greatly increase when the products are subjected to common-use stresses like sunlight, dishwashing, or microwaving. BPA-free replacement products often leach chemicals whose total EA is equal to or greater than the original BPA-containing polycarbonate-based product.



In a recent market survey, PlastiPure tested samples of 15 premium-brand BPA-free baby bottles. The results were disturbing: all 15 baby bottle samples showed easily detectable EA. In almost all cases, both the bottle and nipple leached chemicals having EA, and in more than half, EA levels were equal to or greater than polycarbonate bottles with BPA. Consumers should be aware that BPA-free definitely does not mean EA-free.

In testing thousands of plastic products, PlastiPure has found a surprising number – 92 percent – leached chemicals having significant levels of EA. A systematic program for EA detection, remediation, and certification is needed to ensure that consumers are provided with products certified to be EA-Free by accurate, sensitive, and verifiable tests.

Long before the potential hazards of BPA became well publicized, PlastiPure worked with its partners to develop techniques to predict, detect, measure and eliminate the use of chemicals having EA. Supported by more than 10 grants from the National Institutes of Health and the National Science Foundation and employing and collaborating with internationally known polymer scientists, chemists, biochemists, and biologists, PlastiPure and its key partners have spent the past decade developing physico-chemical models, robotized bioassays, and production methods.

Today, PlastiPure uses its unique, innovative, and patented technologies to help its partners make safer products that do not release chemicals having detectable EA. PlastiPure shows consumers that these products meet its highest standards by placing the PlastiPure-Safe™ EA-Free seal on consumer products and packaging.

PlastiPure works with companies in multiple industries including infant feeding, beverage, personal care, medical supplies and devices, and food packaging. Our current partners with commercial products available in 2010 and early 2011 include Adiri, Water Geeks, ReliaDose, Hydrapak, ReliaBrand, and TOPAS Advanced Polymers.

EA-FREE PLASTIC

odiri watergeeks

ReliaDose

Hydrapak

ReliaBrand

TOPAS

ReliaWrap

The Health-Based Solution: Manufacturing PlastiPure-Safe™ EA-Free Products

PlastiPure uses its patented methods to work with customers throughout the process of product design, manufacturing, and delivery to ensure that a newly manufactured product certified to be EA-Free will remain EA-Free throughout its life cycle. Because the final product contains many chemicals added during many production steps, EA-free materials and protocols are implemented at each stage of the manufacturing process. These EA-free materials and protocols typically add little to the cost of the final product.

PlastiPure uses its patented molecular models, more than 10 years of testing experience, and its comprehensive database to quickly formulate new materials or remediate existing materials.

PlastiPure uses its QSAR predictive models and database of hundreds of monomers, polymers, and additives to source or specify base resins, colorants, and additives to manufacture EA-Free products.

PlastiPure collaborates with compounders to develop specialty materials and additive concentrates when off-the-shelf materials are insufficient, and to improve productivity, part yield, and reliability.

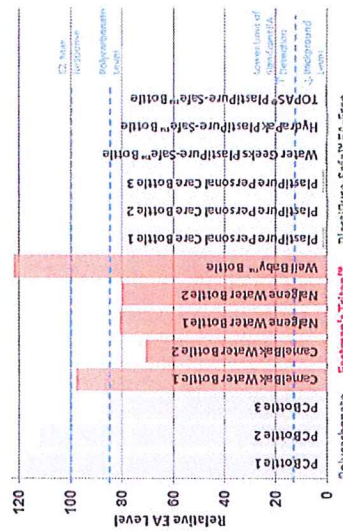
PlastiPure works with molders, extruders, and thermoformers to adapt procedures to avoid introducing chemicals with EA in clean-out and processing.

PlastiPure consults on decorating methods and materials, screen printing, in-mold decorating, offset, hot-foil, and pad printing to achieve a final product that is certifiably EA-Free.

As part of its EA-Free certification process, PlastiPure implements a comprehensive test program during product development cycles, pilot manufacturing, and scale-up. Once a product is released, PlastiPure and the customer implement a sampling and test procedure for ongoing quality assurance to maintain PlastiPure-Safe™ EA-Free certification.

It cannot be emphasized enough that sensitive and accurate testing for very low levels of EA that are linked to negative health effects (in parts per trillion or less) is the key to ensure that products are safe. Examples of test results of products claiming to be EA-free or made from materials claiming to be EA-free are given in the figure to the right. Most examples are made from Eastman's Tritan™ resin.

PlastiPure certification provides assurance that a product is and will remain EA-Free throughout its lifetime. Our customers and partners get the benefit of competitive material and product data, up-to-date knowledge of testing practices, and state-of-the-art processing methods.



Relative EA Level of 100 is the maximum possible of leaching and leaching in this study. A level of 100 is the maximum possible of leaching and leaching in this study. A level of 100 is the maximum possible of leaching and leaching in this study. A level of 100 is the maximum possible of leaching and leaching in this study.



PlastiPure, Inc.
11212 Metric Blvd. Ste. 600
Austin, Texas 78758
512.637.4386

www.plastipure.com

